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Aberrant Polyommatinae (Lycaenidae) from Ohio and Florida

Aberrant Polyommatinae have recently been illustrated by Wright (1979, *J. Lepid. Soc.* 33: 266) and Neil (1983, *J. Lepid. Soc.* 37: 258). Presented here are three extreme aberrations in pattern not previously recorded.

On 19 April 1986, at Shade River State Forest, Meigs Co., Ohio, an aberrant female *Glaucopsyche lygdamus lygdamus* (Doubleday) was collected in a rich stream valley near Forked Run State Park. The individual was found in

association with wood vetch, *Vicia caroliniana* Walt., which grows abundantly along a SE-facing roadbank. This plant is the primary hostplant of the species in Ohio. Between 1030 h and 1200 h the author and D. C. Iftner collected and observed several *G. lygdamus* flying in the vicinity of wood vetch and visiting damp soil along a dirt township road that traverses the valley.

The aberrant female (Fig. 1b) is striking in that the normal basal and postmedian black spots on the ventral surfaces of the hindwings are totally lacking. The small discal bars are the only remnants of normal maculation. The postmedian row of spots on the ventral surface of each forewing is displaced inwardly and is found just beyond the cell. The ventral surface of the left forewing possesses five spots while the opposite wing exhibits only four. The dorsal surfaces are normal. Although *G. lygdamus* is highly variable both individually and geographically, this aberration illustrates a phenotype never before observed in Ohio.

Two aberrant individuals of the subspecies *Hemiargus thomasi bethunebakeri* W. P. Comstock and *Hemiargus ceraunus antibubastus* Hubner were captured in extreme southern Florida. The former specimen (Fig. 1d) is a worn male taken 14 December 1982 on Key Largo, Monroe Co. Ventrally, the forewings possess enlarged and lengthened white areas that taper basally. The hindwings lack the black portions of the basal and costal spots. The postdiscal white band is expanded and tapers inwardly.

The individual of *H. c. antibubastus* (Fig. 1f) is a male in good condition taken 1 September 1982 on Stock Island, Monroe Co., Florida. The specimen has a grossly atypical pattern ventrally. The wing surfaces are almost completely suffused with white scales, creating a submarginal band of dark spots on the forewings. The hindwings slightly differ individually. The two black costal spots of the right hindwing are enlarged and the outermost spot appears "smeared". Two dark postdiscal bands extend completely across the wing. The left hindwing

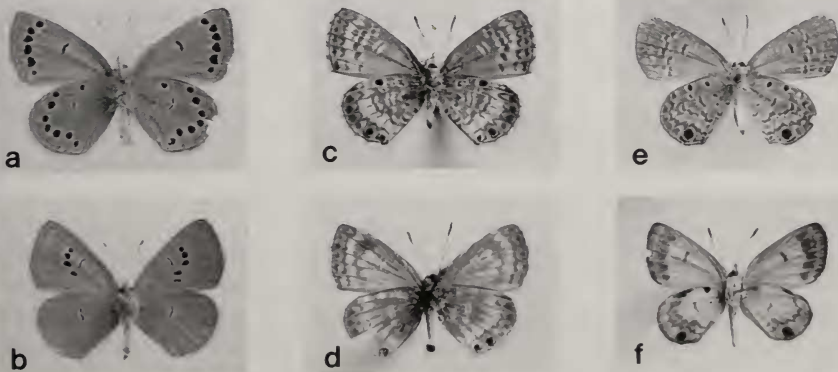


Fig. 1. Aberrant and normal specimens of three species of Polyommatae a. Normal male *G. lygdamus*, b. Aberrant female *G. lygdamus*, c. Normal male *H. thomasi*, d. Aberrant male *H. thomasi*, e. Normal male *H. ceraunus*, f. Aberrant male *H. ceraunus*.

lacks the innermost black costal spot but a "smeared" outermost spot is present. A dark postdiscal band extends across the wing and a partial second band extends from the inner margin to CU_1 .

The specimens figured are in the collection of the author.

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Ommochromes in Libytheidae

Ommochromes are a group of pigments that occur as granules in insect eyes and in various other organs and tissues (Robinson, 1971, *Lepidoptera Genetics*, Pergamon Press, Oxford). The red meconium of teneral adults, which contains ommochromes, is widespread in Pierinae and Nymphalinae and is also known to occur in a few Coliadinae, *Charaxes*, and certain Parnassiinae (Shapiro, 1982, *J. Res. Lepid.* 20: 97–102). Some Pierinae have red eggs which may be a manifestation of ommochromes (Shapiro, op. cit.); ommochromes can also be brown in color (Robinson, op. cit.). Since pterins and ommochromes are often associated in insect eyes (including Lepidoptera) and tend to be affected by the same mutation, it is thought that certain pterins are involved in the enzymatic processes that form ommochromes (Robinson, op. cit.; Gilmour, 1961, *The Biochemistry of Insects*, Academic Press, New York & London). It was recently discovered that some Libytheidae contain pterin pigments in their wings (Shields, 1987, *J. Chem. Ecol.*, in press).

The meconium of two freshly emerged *Libytheana bachmanii bachmanii* Kirtland from College Station, Texas, was light reddish orange to moderate orange with brown speckles, i.e. rust tan or testaceous in color (T. Friedlander, in litt.). When this species is ready to pupate, it spins a button of red silk on the underside of a leaf (Edwards, 1881, *Canad. Ent.* 13: 226–229). When first laid, the egg of *Libythea laius* Trimen is whitish but in two days turns to a pale, dull salmon tint; similarly, *Libythea celtis celtis* Fuessly eggs turn brownish-pink (Shields, 1985, *Tokurana* 9: 1–58). These data suggest the Libytheidae may also contain ommochromes.

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